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PN - JP62248495 A 19871029
PD - 1987-10-29
PR - JP19860093840 19860423
OPD - 1986-04-23
TI - PRODUCTION OF VITAMIN A ESTER
IN - INADA YUJI
PA - MIHAMA HISAHARU
IC - C12P7/62
CT - JP60156395 A []

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TI - Prodn. of Vitamin=A long chain fatty acid ester - in presence of lipase modified with O-methoxy PEG
PR - JP19860093840 19860423
PN - JP62248495 A 19871029 DW198749 002pp
PA - (MIHA-I) MIHAMA H
IC - C12P7/62
AB - J62248495 Prodn. reacting (un)satd. chain fatty acid on vitamin A acetate in an organic solvent in the presence of lipase modified with o-methoxy polyethyleneglycol.
- The modified lipase is soluble in organic solvents and catalyses the ester-exchange reaction in the solvents.
- ADVANTAGE - High yield (80-85%) is obtd. In this method, the reaction is performed under a mild condition, therefore, a peroxide value of the prod. is low as compared with chemical synthesis method. Excess use of vitamin A is toxic, but the toxicity of long chain fatty acid ester of vitamin A is low.
- In an example, the lipase which was used in this example was modified with (o-methoxypolyethyleneglycol) -6-chloro-S-triazine at 52% of amine gps. of the molecule. The modified lipase was dissolved in 100 microl of water-satd. benzene and the soln. was mixed with 100 microl of a benzene soln. contg. 200 mM palmitic acid and 20 mM vitamin A acetate. The reaction was performed at 25 deg.C for 24 hours under N2 gas. After the reaction, the yield of vitamin A-palmitate was 85%, as determined with high performance liquid chromatography(hplc).(0/0)

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IN - INADA YUJI
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TI - PRODUCTION OF VITAMIN A ESTER
AB - PURPOSE: To produce the titled compound under mild condition in high yield suppressing by-production of peroxide, by reacting vitamin A acetate with a long-chain fatty acid in the presence of a lipase modified with O-meth oxypolyethylene glycol.
- CONSTITUTION: A modified lipase produced by modifying 52% of amino group in a lipase molecule with O-methoxypolyethylene glycol [e.g. 2,4-bis(O-meth oxypolyethylene glycol)-6-chloro-S-triazine] is dissolved in benzene saturated with water and the obtained solution is added to a benzene solution containing vitamin A acetate. The objective vitamin A ester can be produced by reacting the mixed solution with a saturated or unsaturated long-chain fatty acid (e.g. palmitic acid).
I - C12P7/62

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